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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/583,120	05/30/2000	SHRIRAM BAGRODIA	05015.0302	1838

6980 7590 04/15/2003

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EXAMINER
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WYROZEBSKI LEE, KATARZYNA I

ART UNIT	PAPER NUMBER
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1714

21

DATE MAILED: 04/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/583,120

Applicant(s)

BAGRODIA ET AL.

Examiner

Katarzyna Wyrozebski Lee

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1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 February 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-10,12-14,18,19,22 and 30-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 7-10, 13, 14, 22, 30,34-36, 40-43 is/are rejected.
- 7) ☒ Claim(s) 5,6,12,18,19,31-33,37-39 and 44-48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

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In view of declaration submitted by the applicant's the rejection over the prior art of record is hereby overcome. The following office action is non-final due to 112 2<sup>nd</sup> paragraph issues not addressed previously and due to double patenting rejection.

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 3, 4, 7-10, 13, 14, 22, 30 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 31, 38, 45, 46 and 47 of copending Application No. 09/896,961 ('961). Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

The co-pending application '961 discloses composition and process for making exfoliated clays in polyamides. The clay component of the '961 is purified to contain less than 2 % quartz

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impurity. Clay is also treated with organic cation to result in intercalate. The intercalate is then mixed with polyamide and sheared so that at least 50 % of the clay component is in a single platelet form. Single platelet in melt mixed with polymer is the same as nanocomposite. Especially when the co-pending application states that the clay component has thickness of less than 2 nm and diameter in a range of 10-3,000 nm.

In the light of the above disclosure, one of ordinary skill in the art at the time of the instant invention would arrive at present claims when forming intercalates of the co-pending application '961. This is because the intercalated clay in the copending application exfoliates.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1, 9, 22, 30, 34, 35, 36, 40, 41, 42, 43 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims listed above contain following limitations, which are indefinite:

Claim 1 contains limitation of "less than about 2%". It is not clear if the amount claimed is "less than" or "about" 2%.

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Claim 9 contains limitation of “at least about 50%”, and “less than about 2 nm”. It is not clear if the amount claimed is “at least” or “about” 50%. It is also not clear if the amount claimed is “less than” or “about” 2 nm.

Claim 22 contains limitation of “less than about 2%”. It is not clear if the amount claimed is “less than” or “about” 2%.

Claim 30 contains limitation of “less than about 2%” and “less than about 4%”. It is not clear if the amount claimed is “less than” or “about” 2%. It is also not clear if the amount claimed is “less than” or “about” 4%.

Claim 34 contains limitation of “at least about 10%”. It is not clear if the amount claimed is “at least” or “about” 10%.

Claim 35 contains limitation of “at least about 4%”. It is not clear if the amount claimed is “at least” or “about” 4%.

Claim 36 contains limitation of “less than about 2%”. It is not clear if the amount claimed is “less than” or “about” 2%.

Claim 40 contains limitation of “less than about 0.7%”. It is not clear if the amount claimed is “less than” or “about” 0.7%.

Claim 41 contains limitation of “less than about 0.5%”. It is not clear if the amount claimed is “less than” or “about” 0.5%.

Claim 42 contains limitation of “less than about 0.7%”. It is not clear if the amount claimed is “less than” or “about” 0.7%.

Claim 43 contains limitation of “less than about 0.5%”. It is not clear if the amount claimed is “less than” or “about” 0.5%.

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***Allowable Subject Matter***

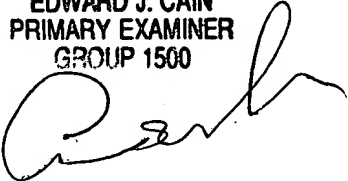
5. Claims 5, 6, 12, 18, 19, 31-33, 37-39, 44-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski Lee whose telephone number is (703) 306-5875. The examiner can normally be reached on Mon-Thurs 6:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
KIWL  
April 11, 2003

  
EDWARD J. CAIN  
PRIMARY EXAMINER  
GROUP 1500